SUPERFUND RESPONSE ACTION PRIORITY PANEL REVIEW FORM

Date Form Completed: October 7, 2014

General Site Information

Region:	10	City:	Clackamas	State:	Oregon
CERCLIS EPA ID:	ORD 980988307		CERCLIS Site Name:	Northwest Pipe and Casing	
NPL Status: (P/F/D)	F		Year Listed to NPL:	1992	

Brief Site Description: *(Site Type, Current and Future Land Use, General Site Contaminant and Media Info, Site Area and Location information.)*

The Northwest Pipe and Casing (NWPC) Site is located in an expanding metropolitan area of Clackamas County, Oregon, approximately 20 miles southeast of Portland. The Site, located between SE Lawnfield and SE Mather roads, is immediately east of the Southern Pacific Railroad tracks and approximately 0.5 mile east of Interstate 205. The vicinity of the Site consists of primarily of light industrial and commercial properties. The closest residential community is located approximately 0.5 mile south/southeast of the site. The Site has entered redevelopment and currently is utilized for light industrial and commercial purposes. Currently, a highway, to connect Interstate 205 and Oregon Highway 212, is being built through the Site.

The Site covers approximately 53 acres of land and was divided into two parcels (Parcel A (21 acres) and Parcel B (32 acres)) for the purposes of Site management. A pipe manufacturing and storage operation (Northwest Pipe and Casing Company) operated at Parcel A from 1973 to 1985. The eastern lot of Parcel A is owned by Northwest Development Corporation (NWDC) and contains three commercial use buildings. The western lot of Parcel A is owned by the Oregon Department of Transportation (ODOT). A pipe-coating business (Hall Process Company) operated at Parcel B from 1956 to 1978. Northwest Pipe and Casing Company leased the Hall property, between 1978 and 1986, during which Northwest Pipe and Casing Company operated the pipe-coating facilities. During operations, contaminants were released at the Site into the soil and groundwater. The contaminants included volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs).

Northwest Pipe and Casing Company, Wayne Hall, NWDC and ODOT each entered into Consent Decrees with EPA and the State of Oregon to address their liability under CERCLA for contamination at the Site. Parcel A is still owned by ODOT and NWDC, while Parcel B is now owned by Clackamas Development Agency (CDA) and partly leased to Oregon Iron Works (OIW). Currently, both Parcels are in or undergoing industrial reuse and redevelopment.

The Site is underlain by an upper water bearing zone (WBZ) that overlies a silt confining layer above the Troutdale Aquifer. The upper WBZ extends to about 90 feet below the ground surface (bgs) and consists of three hydro geologic zones (shallow, intermediate, and deep). The silt confining layer serves as a hydraulic barrier between the upper WBZ and the Troutdale Aquifer. Currently, groundwater use is restricted through deeds (recorded EES) with all current property owners. However, groundwater at the Site is considered to be a future source of drinking water.

The Site was divided into two operable units (OUs) to address soil (OU1) and groundwater contamination (OU2). The remedy for OU1 addressed the bulk of the soil contamination that was found on Parcel B during the remedial investigation (RI). The remedy for OU2 addressed the four groundwater plumes that were found to extend beneath Parcels A and B during the RI

General Project Information

Type of Action:	Remedial and/or Removal	Site Charging SSID:	303DD2 10G8RD00
Operable Unit:	OU 1 & OU 2	CERCLIS Action RAT Code:	

Is this the final action for the site that will result in a site construction completion? (The site has already achieved construction completion) ☐ Yes ☒ No

Will implementation of this action result in the Environmental Indicator for Human Exposure being brought under control? (Human exposure is under control. Groundwater migration is in question.) ☐ Yes ☒ No

Response Action Summary

Describe briefly site activities conducted in the past or currently underway:

The following is a summary of the OU1-soil and OU2-GW past and current site activities:

October 1992 to March 2000 (OU1-soil and OU2-GW)

- The Northwest Pipe and Casing (NWPC) site placed on the National Priority List (NPL)
- The Agency for Toxic Substances and Disease Registry (ATSDR) health assessment identified soil and deep aquifer as exposure pathways and ambient air as a past exposure pathway
- Consent Decrees between EPA, Oregon Department of Environmental Quality (DEQ), and Preliminary Responsible Parties (PRPs), with monetary settlement, entered in federal court
- EPA completed a Baseline Risk Assessment (BRA), Remedial Investigation (RI), Feasibility Study (FS), and Proposed Plan (PP)

June 2000 to July 2005 (OU1-soil)

- OU1-soil Record of Decision (ROD) issued, June 2000
- Phase I Remedial Action (RA) – soil excavation/thermal treatment/disposal of ~32,000 tons of material completed by June 2002
- Phase 2 RA – 2 foot clean soil cap completed by September 2004
- Explanation of Significant Difference (ESD) issued primarily for wetlands mitigation and restoration, March 2004
- EPA issued RA completion, July 2004
- Oregon state (State) assumes operations and maintenance (O&M) for OU1-soil, Parcels A&B, July 2005
- Clackamas county (County) purchases property (Parcel B), assumes O&M for OU1-soil, EES memorialized, October 2005

September 2001 to May 2007 (OU2-GW)

- OU2- GW Record of Decision (ROD) issued, September 2001
- RA to treat and contain GW initiated and construction completed (including groundwater circulation wells (GCW)
- Start of Long Term Response Action (LTRA) operation; EPA retains responsibility, 2005
- EPA determines RA not fully functioning as intended, GCWs system shutdown

November 2008 to Present

- Based on GW monitoring results, Focused Field Investigation (FFI) completed; additional contamination source area identified, November 2008
- Action Memorandum (AM) for Time Critical Removal Action (TCRA) issued, July 2009
- TCRA, including soil amendment, completed, November, 2009
- Based on GW monitoring results and additional field investigation a second additional contamination source area identified close to prior TCRA area, July 2013

- Exemption 5 - DP

Specifically identify the discrete activities and site areas to be considered by this panel evaluation:

The discrete activities to be considered:

- Contaminated soil removal, soil amendment installation, backfill
- OU2-GW -- Focused Feasibility Study (FFS)/Proposed Plan (PP)/ ROD Amendment addressing modified GW remedy.
- Modified GW remedy implementation (may involve enhanced MNA including modified monitoring network)

Briefly describe additional work remaining at the site for construction completion after completion of discrete activities being ranked:

Construction Completion has previously been achieved for OU2-GW. However, a FFS/PP/ROD Amendment is required, after the proposed removal action is completed, to address existing GW contamination not fully addressed with the prior GW remedy.

Response Action Cost

Total Cost of Proposed Response Action:

($ amount should represent total funding need for new RA funding from national allowance above and beyond those funds anticipated to be utilized through special accounts or State Superfund Contracts.)

The estimated capital cost of the remedy (removal action and follow-up actions) is $ 3.2M.

Source of Proposed Response Action Cost Amount:

(ROD, 30%, 60%, 90% RD, Contract Bid, USACE estimate, etc…)

The source of the cost information is the Removal Program – Removal Assessment Decision documentation for the removal actions. Exemption 5 - DP

Breakout of Total Action Cost Planned Annual Need by Fiscal Year:

(If the estimated cost of the response action exceeds $10 million, please provide multiple funding scenarios for fiscal year needs; general planned annual need scenario, maximum funding scenario, and minimum funding scenario.)

FY 2015 -- $ 2.2M for removal action and FFS start

Other information or assumptions associated with cost estimates?

Readiness Criteria

1. Date State Superfund Contract or State Cooperative Agreement will be signed (Month)?

Prior State agreement in place, 1998.

2. If Non-Time Critical, is State cost sharing (provide details)?

Currently, the State supports the proposed removal action. Exemption 5 - DP

3. If Remedial Action, when will Remedial Design be 95% complete?

The Removal Program has a preliminary removal design/plan available for implementation; the final design/plan could be in place within 3 months of fund disbursement.

4. When will Region be able to obligate money to the site?

TBD

5. Estimate when on-site construction activities will begin:

On-site construction removal activities could begin within 6 months of fund disbursement.

6. Has CERCLIS been updated to consistently reflect project cost/readiness information?

We will be updating CERCLIS when we have a clearer picture of our path forward.

Site/Project Name:	Northwest Pipe & Casing

Criteria #1 - RISKS TO HUMAN POPULATION EXPOSED (Weight Factor = 5)

Describe the exposure scenario(s) driving the risk and remedy. Include risk and exposure information on current/future use, on-site/off-site, media, exposure route, and receptors:

The residual source of contamination in subsurface soils is a chronic source of dissolved hazardous substances to the groundwater underlying the Site. As long as the residual saturation of contamination in soil remains, the contamination will percolate downward through the subsurface. The slow rates of dissolution will continue to feed the groundwater plume for an indeterminate period, thus increasing the potential for contamination to migrate toward down gradient drinking water supplies (Troutdale aquifer which serves as a municipal water supply).

Estimate the number of people reasonably anticipated to be exposed in the absence of any future EPA action for each medium for the following time frames:

MEDIUM	<2yrs	<10yrs	>10yrs
Groundwater	0	0	500
Soil	20	20	50

Discuss the likelihood that the above exposures will occur:

It is unlikely that the groundwater in the area would be used as a drinking water source in the near future but the certainty with that decreases with time. In the future, it's more uncertain how or whether groundwater would be used at or near the site. It is more certain that utility or construction workers would come into contact with the contaminated soils given its proximity to the highway, utility corridors, industrial development and work going on to improve infrastructure in the area.

Other Risk/Exposure Information?

N/A

Site/Project Name:	Northwest Pipe & Casing

Criteria #2 – SITE/CONTAMINANT STABILITY (Weight Factor = 5)

Describe the means/likelihood that contamination could impact other areas/media given current containment:

The newly identified soil contamination is currently migrating to groundwater and is likely the reason that the Site has not achieved cleanup goals as predicted.

Are the contaminants contained in engineered structure(s) that currently prevents migration of contaminants? Is this structure sound and likely to maintain its integrity?

No, the contaminants are not contained in engineered structures.

Are the contaminants in a physical form that limits the potential to migrate from the site? Is this physical condition reversible or permanent?

No, the contaminants are not in a physical form that limits their migration to groundwater.

Are there institutional physical controls that currently prevent exposure to contamination? How reliable is it estimated to be?

Institutional controls are in place to prevent exposure to site soil and groundwater contamination. Access is physically restricted at the site. Deed restrictions are in place to limit groundwater usage.

Other information on site/contaminant stability?

A removal action is warranted at this Site due to:

- The ongoing GW contamination due to newly identified soil source
- The anticipated future groundwater usage associated with the Troutdale aquifer and extensive industrial and residential growth in the vicinity of the Site

Site/Project Name:	Northwest Pipe & Casing

Criteria #3 – CONTAMINANT CHARACTERISTICS (Weight Factor = 3)

(Concentration, toxicity, and volume or area contaminated above health based levels)

List Principle Contaminants (Please provide average and high concentrations.):

(Provide upper end concentration (e.g., 95% upper confidence level for the mean, as is used in a risk assessment, or maximum value [assuming it is not a true outlier], along with a measure of how values are distributed {e.g., standard deviation} or a central tendency values [e.g., average].)

Contaminant #	***Media**	****Concentrations** #
Napthalene	SL	Up to 250,000 ug/kg

Tetrachloroethene (PCE)	SL	7800 – 3,170,000 ug/kg
Trichloroethene (TCE)	SL	17,400 – 66,000 ug/kg
Cis 1,2-DCE	SL	10,000 -- 80,000 ug/kg
Vinyl Chloride	SL	588 ug/kg (one location)
Napthalene	GW	Up to 602 ug/L
Tetrachloroethene (PCE)	GW	14 – 76,200 ug/L
Trichloroethene (TCE)	GW	12 -- 6470 ug/L
Cis 1,2-DCE	GW	441 - 231,000 ug/L
Vinyl Chloride	GW	5 -- 368 ug/L

*(*Media: AR – Air, SL – Soil, ST – Sediment, GW – Groundwater, SW – Surface Water)*

*(**Concentrations provided during 2014 Source Investigation)*

(# Only contaminates and concentrations associated with the proposed removal action are included)

Describe the characteristics of the contaminant with regard to its inherent toxicity and the significance of the concentrations and amount of the contaminant to site risk. *(Please include the cleanup level of the contaminants discussed.)*

The contaminants in groundwater are PCE, TCE and vinyl chloride. The MCL for both PCE and TCE is 5 ug/l and the MCL is 2 ug/l for vinyl chloride. Based on the concentrations found in groundwater, these contaminants represent a greater than 1X10-3 risk. The maximum concentrations found in 2013 are up to 14,000 times the MCL for PCE for groundwater. The maximum concentrations found in soil qualify as principal treat material and are approximately 400,000 times the cleanup up level of 7 ug/kg.

Describe any additional information on contaminant concentrations that could provide a better context for the distribution, amount, and/or extent of site contamination. *(e.g. frequency of detection/outlier concentrations, exposure point concentrations, maximum or average concentration values, etc.)*

N/A

Other information on contaminant characteristics?

Previous source removal achieved some long term reduction in groundwater contamination; however, the source discovered in 2013 turned out to be the area with the highest concentration of contaminates. The previous maximum concentrations found in soil and groundwater samples for PCE were approximately 370,000 ug/kg in soil and 13,000 ug/l in groundwater. The source found in 2013 had maximum concentrations of 3,170,000 ug/kg in soil and 76,000 ug/l in groundwater. Furthermore, molecular data derived from compound specific isotope analysis (CSIA) and molecular DNA analysis indicated that the source area found in 2013 was dissimilar from all previously known sources at the site. The modeling indicates that the previous source removals have reduced the concentration of contaminates in groundwater and that natural attenuation will achieve the cleanup goals. However, without the physical removal of the new source area groundwater in that area will be unlikely to ever achieve the ROD cleanup goals.

Site/Project Name:	NW Pipe and Casing

Criteria #4 – THREAT TO SIGNIFICANT ENVIRONMENT (Weight Factor = 3)

(Endangered species or their critical habitats, sensitive environmental areas.)

Describe any observed or predicted adverse impacts on ecological receptors including their ecological significance, the likelihood of impacts occurring, and the estimated size of impacted area:

N/A

Would natural recovery occur if no action was taken? ☐ Yes ☒ No
If yes, estimate how long this would take.

Once the Removal Action is completed, based on current modeling, natural recovery is projected to occur in approximately 30 years.

Other information on threat to significant environment?

N/A

Site/Project Name:	NW Pipe and Casing

Criteria #5 – PROGRAMMATIC CONSIDERATIONS (Weight Factor = 4)

(Innovative technologies, state/community acceptance, environmental justice, redevelopment, construction completion, economic redevelopment.)

Describe the degree to which the community accepts the response action.

Removal action is consistent with OU1-soil ROD and supports OU2-GW ROD, both of which were accepted by the local community.

Describe the degree to which the State accepts the response action.

The Oregon Department of Environmental Quality (ODEQ) concurs with the removal action.

Describe other programmatic considerations, e.g.; natural resource damage claim pending, Brownfields site, use of innovative technology, construction completion, economic redevelopment, environmental justice, etc…

The site is already in redevelopment and reuse; the newly identified contamination hinders, to a degree, full redevelopment and reuse. Additionally, the current GW remedy is not functioning as designed and has been shut down. Therefore, a modified GW remedy is needed.